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ABSTRACT

A social and academic change program was designed for an 11-year-old educable mentally retarded female with Downs Syndrome. Noncompliant behavior was modified through systematic and consecutive manipulations of two reinforcement systems. Responding to teacher requests within 5 seconds was reinforced within the context of math instruction in order to decrease an inappropriate social behavior while concomitantly increasing a critical academic skill. A simple A-B time series design was employed to evaluate the effectiveness of the interventions. A token economy and verbal praise treatment package was found to be an effective system for reducing noncompliance and increasing math proficiency. Other factors contributing to the program's effectiveness may have included consistent feedback in the form of charting daily behavior, goal setting, personal attention, and the student's own interest in the program. It was noted that noncompliance increased on days in which an unfamiliar concept was introduced. The concurrent increase in academic achievement was attributed in large measure to the decrease in noncompliance. (Author/JW)

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It Worked in My Classroom:

A SOCIAL AND ACADEMIC BEHAVIOR CHANGE PROGRAM

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Abstract

The noncompliant behavior of an educably mentally retarded 11-year-old girl was modified through systematic and consecutive manipulations of two reinforcement systems. Responding to teacher requests within 5 seconds was reinforced within the context of math instruction in order to decrease an inappropriate social behavior while concomitantly increasing a critical academic skill. A simple A-B time series design was employed to evaluate the effectiveness of the interventions. A token economy and verbal praise treatment package was found to be an effective system for reducing noncompliance and increasing math proficiency.

STATEMENT OF PROBLEM AND RATIONALE

The purpose of this social and academic change program was to attempt to decrease the noncompliance of a single student within a small group setting while also attempting to increase her academic behavior in a single subject-Math. Noncompliance was defined as failing to respond to a given directive at all, failing to initiate a response to a given directive within five seconds, or performing some other non-requested behavior (Schoen, 1986). Compliance, therefore, was defined as responding or initiating a response to a command within five seconds. The rationale for the selection of noncompliance as the student's target behavior was the obvious frequency of noncompliance and its disruptive effects upon the small group.

Along with the decrease in the inappropriate noncompliance was the attempt to increase the academic behavior during the Math period. Mastery of any given concept was set at 85% accuracy during the daily seatwork following direct instruction. Math was chosen as the target subject because the researcher hypothesized that it was the subject most adversely affected by the subject's noncompliance.

METHOD

Subject and Setting

An eleven year old female was chosen as the subject of the program. She was one of seven students in a math group of educably mentally retarded students in a suburban parochial setting. The subject has

downs syndrome and was at the onset of the project functioning at a 1.2 math level according to school records.

The program was conducted in the regular classroom and the library four days a week for forty minutes per day. The classroom was arranged in such a way that the subject sat in a desk placed in a group of three other desks. The classroom also contained three other similar desk groupings, shelves containing books and instructional materials, a teacher's desk, and a coat closet. The project's materials included a paper cup, bingo chips, a shoe box, and various reinforcers listed in Table 1.

Interventions

Two interventions were chosen and implemented in the program. Social praise alone was first implemented for two days followed by a token economy and praise together system for eleven days. In the praise alone intervention, following compliance to a specific natural directive, the student was thanked for the specific behavior and praised for doing what she was told the first time she was asked. In the token economy and praise system, following compliance, the subject was specifically praised and was also rewarded with a bingo chip in a paper cup which could, at the end of the period, be "traded in" for a reinforcer. The directives were given unconditionally and at normally occurring rates. They were, however, very specific in form. Noncompliance, in both interventions, was ignored though the desired behavior was still expected.

Procedure

The program was implemented only by the researcher to ensure consistency. Reliability was assessed once during baseline and once during the second intervention (token economy and praise) by a student teacher instructed in the definitions of compliance and noncompliance.

Before implementing the token economy intervention, the researcher oriented the subject to the system by presenting the subject with the shoebox covered with construction paper and allowing the student to decorate it and make it her own, thus establishing ownership in the program. The reinforcers were then examined and placed in the box. The system of receiving a chip each time the subject exhibited a requested behavior the first time asked was then explained and a chip value for each reinforcer decided upon by both the researcher and the subject (Table 1). It was then explained that at the end of each day's math period the subject and the researcher would take the box out of the coat closet and go to the library to "trade".

To also give the subject ownership in the academic change aspect of the project, she was shown a graph of her baseline academic performance. She was then told that during the library meeting her performance during the seatwork part of the period would be added to the graph and an additional chip would be given each day "the line goes up".

Design

An AB design was chosen to determine the effectiveness of the program. Baseline data were recorded on targeted behaviors for four days with no mention of the project to the subject. The rate of

noncompliance was calculated by dividing the occurrances of noncompliance by the total number of given directives multiplied by 100. Academic accuracy was determined by dividing correct responses on daily seatwork by the total number of problems multiplied by 100.

RESULTS

Tables 2 and 3 show the changes in both the social and academic behaviors from baseline through both interventions. During baseline noncompliance occurred at an average rate of 65%. The praise alone intervention increased this rate to 86% over a two day period. The institution of the token economy and praise system decreased the subject's noncompliance to 35%. It was reported that the data taken during baseline were 93% reliable while the data during intervention were 100% reliable.

Academic behavior during baseline was at 61% accuracy. During the praise alone intervention, the subject performed at 54% accuracy. During the token economy and praise intervention, three different academic concepts were introduced with the subject mastering the first two. Overall academic performance increased to 75% during the second intervention. Reliability during both baseline and intervention was recorded at 100%.

DISCUSSION

The results of this program indicate that a token economy system combined with praise may be an effective method of decreasing noncompliance while increasing academic performance. A further factor in the success of the program, however, may have been the consistent

feedback given to the subject during the library sessions in the form of charting daily behavior and explaining the need for the graph lines to go up or down, and subsequent goal setting for the following day.

Other research on the effectiveness of a token economy system also suggests it as an effective method for modifying inappropriate behavior. Knapczyk and Livingston (1973) found that the academic performance of students was significantly greater when a token system was in effect than when it was not. Zimmerman, Zimmerman, and Russell (1969) concurred with the findings of this study by reporting that token reinforcements generated and maintained higher frequencies of instruction-following behavior compared to that behavior maintained under a praise only system. While the methods of their study and this project differed in that the Zimmerman et al study was instituted for a group of students rather than an individual subject, both show the obvious favorable results of a token system. It is possible that the combining of praise for compliance and ignoring noncompliance contributed to the increase in noncompliance. Without reprimands for the extremely high rate of noncompliance, there was very little opportunity for praise to be given, thus minimizing its potential for success as an intervention in and of itself.

Axelrod (1983) states that tokens alone have little reinforcing power. They become effective by being exchangeable for back-up reinforcers. He stresses that an appropriately functioning token system requires that a teacher specify the behaviors to be performed in order to be rewarded and the cost of each back-up reinforcer. It was a primary goal of the researcher to establish ownership in the project by the subject. It was for this reason that cost for reinforcers was set

by both the researcher and the subject. The subject was made to feel as if the program was hers and that the researcher was only a means by which it could be implemented. Daily feedback as to progress in both the social and academic change areas was given and the student developed a personal pride in her achievements. Schoen (1986) noted that it was possible that increased attention may have been sufficiently reinforcing to maintain her subject's compliance. It is possible, therefore, that the attention coupled with the personal interest taken in the program by the student contributed to its effectiveness.

Observation of the results show that noncompliance increased days on which an unfamiliar academic concept was introduced. This finding is somewhat contrary to that of Haring, Liberty, and White (1980) who found that noncompliance was reduced when moving to a more difficult skill level. It is possible, however, that the subject of this program reacts to new and challenging situations by simply rejecting them and anything associated with them. With skill acquisition, noncompliance decreased implying that the student is more willing to cooperate when in situations in which she feels comfortable. It is the opinion of the researcher that the subject knew what to do following each given directive, but chose not to do so, thus resisting not only the researcher but the entire situation in which she found herself.

The concurrent increase in academic achievement can be greatly attributed to the decrease in noncompliance. Because the subject became more of a positive factor in the group due to her compliance, her participation in the academic arena grew, increasing the likelihood of success. The subject, at the completion of the program, still performed at a lower level than her classmates, and still required more time to

master a concept; however, her level of performance was not nearly as significantly lower than the others' as at the intervention's onset.

Neither fading nor research on the the generalization of compliance to other subject areas was intituted to extend the program. Further research may be done as to the effects of the decrease in group disruptions due to a single student's increased compliance on the academic performance of the group as a whole. Findings as to the possibility of whole group benefits may give further reason to institute a token economy and praise system in order to decrease noncompliance.

TABLE 1
REINFORCER LIST AND COST

REINFORCER	COST
STAR	5 chips
STICKER	8 chips
ERASER	10 chips
PENCIL	12 chips
MARKER	15 chips

TABLE 2

PERCENTAGE OF NONCOMPLIANCE

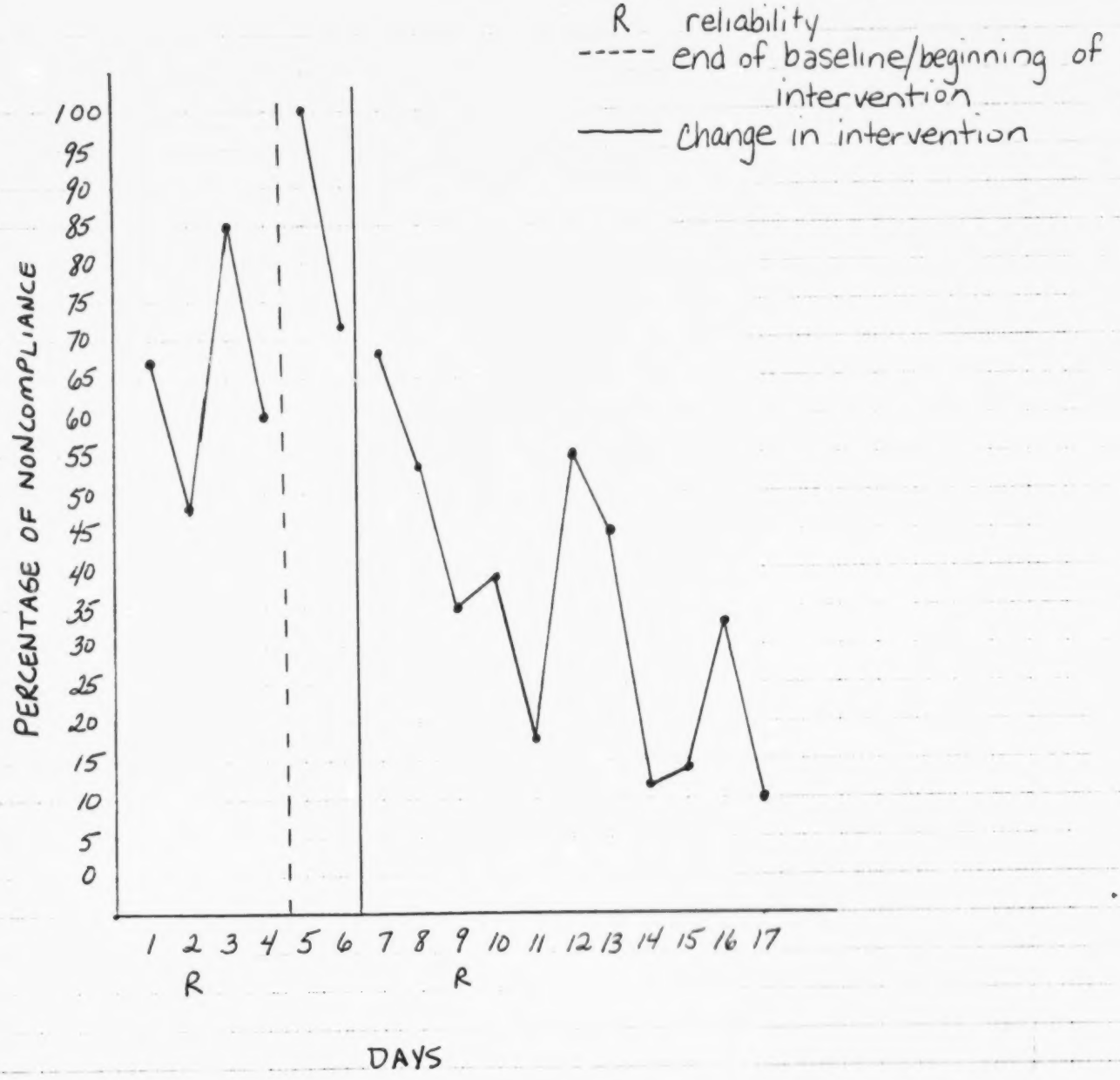
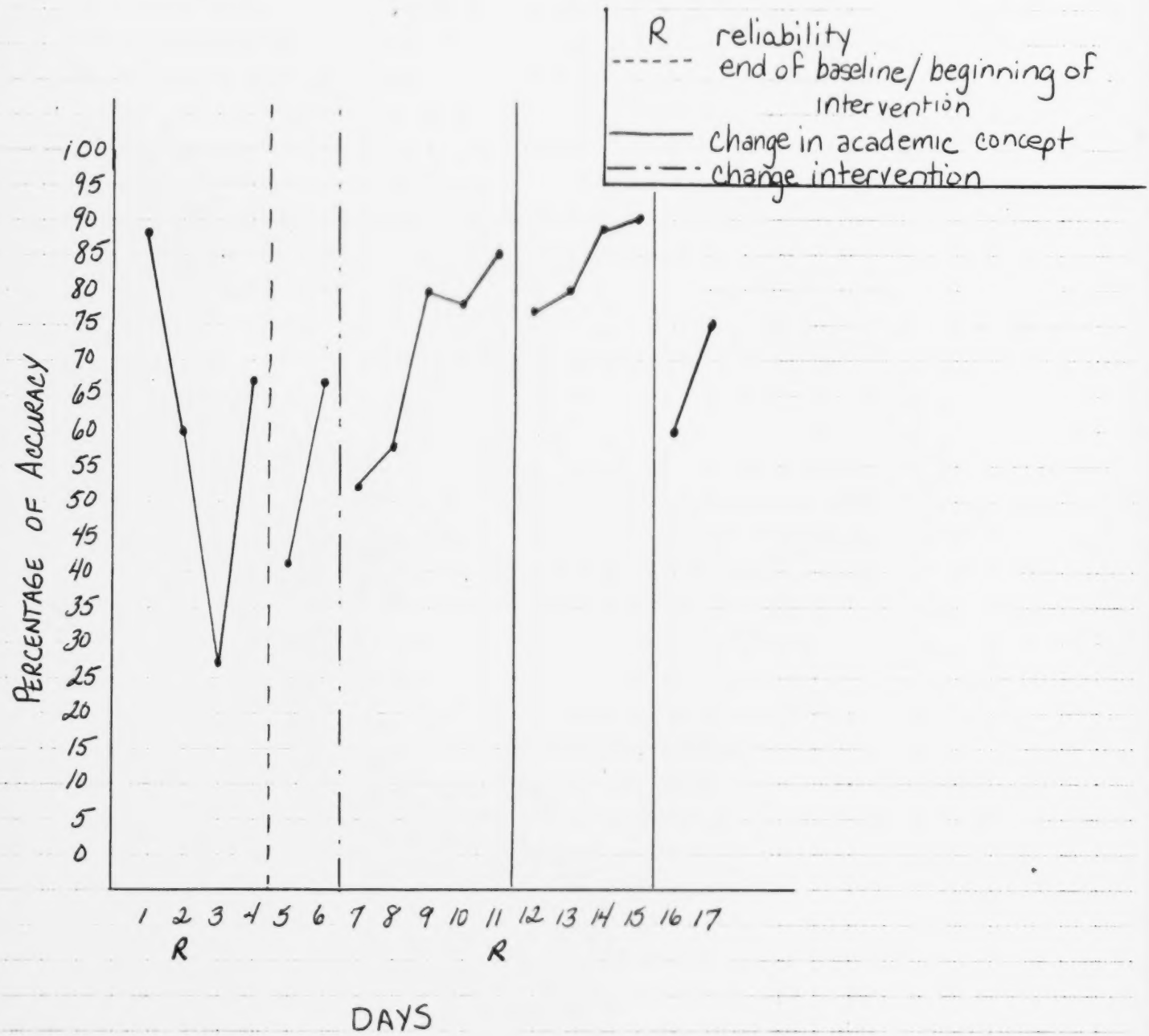


TABLE 3

PERCENTAGE OF ACADEMIC ACCURACY



BIBLIOGRAPHY

AXELROD, S. (1983). Behavior Modification for the Classroom Teacher. New York: McGraw-Hill Book Company.

HARING, N.G., LIBERTY, K.A., & WHITE, O.R. (1980). Rules for data-based strategy decisions in instructional programs: Current research and instructional implications. In W. Sailor, B. Wilcox, & L. Brown (Eds.), *Methods of instruction for severely handicapped students*. Baltimore: Paul H. Brookes.

KNAPCZYK, D.R., & LIVINGSTON, G. (1973). Self-recording and student teacher supervision: variables within a token economy structure. Journal of Applied Behavior Analysis, 3, 481-486.

SCHOEN, S.F. (1986). Decreasing noncompliance in a severely multi-handicapped child. Psychology in the Schools, 23, 88-94.

ZIMMERMAN, E., ZIMMERMAN, J., & RUSSELL, C. (1969). Differential effects of token reinforcement on instruction-following behavior in retarded students instructed in a group. Journal of Applied Behavior Analysis, 2, 101-112.